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loaded data for a certain time, the plurality of data areas being managed by time series [in which given time series data pieces are loaded in a sequence of times];  
and

bookmark information areas respectively provided at predetermined locations in said plurality of data areas, each having a pair of bookmark information indicative of a time corresponding to a time series data piece loaded in each of said data areas and state transition information indicative of a state of the data piece in said each data area, said state transition information being allowed to have one of a value indicative of an online state in which the data area is permitted to be retrieved and a value indicative of a loading state in which loading of data in the data area has not yet been completed and the data area is not permitted to be retrieved.

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4. (Twice Amended) A data structure, stored on a storage medium, in a database, comprising:

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a plurality of data areas in which given time series data pieces are loaded at predetermined locations, respectively, in said database, each of said plurality of data areas being loaded data for a certain time, the plurality of data areas being managed by time series [in a sequence of times]; and

predetermined bookmark information areas each having a pair of bookmark information indicative of a time corresponding to a time series data piece loaded in each of said data areas and state transition information indicative of a state of the data piece in each data area, said state transition information having one of a value indicative of an online state in which the data area is permitted to be retrieved and a value indicative of a loading state in which loading of data in each

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cont data area has not yet been completed and the data area is not permitted to be retrieved.

7. (Twice Amended) A database managing method for managing data in a database, comprising [the steps of]:

adding, to a predetermined location in a given time series data piece for a predetermined time, bookmark information having bookmark information indicative of a time corresponding to said time series data piece for said predetermined time and state transition information indicative of a state of said time series data piece for said predetermined time;

providing, as said state transition information, one of a value indicative of an online state in which the data area is permitted to be retrieved, a value indicative of a loading state in which loading of data in the data area has not yet been completed and the data area is not permitted to be retrieved and a value indicative of a state in which data in the data area is empty; and

loading time series data pieces for predetermined times in a plurality of data areas in said database, each of said plurality of data areas being loaded data for a certain time, the plurality of data areas being managed by time series [in sequence of times corresponding to said time series data pieces].

11. (Twice Amended) A database managing method according to claim 7, further comprising [the steps of]:

cumulating repeatedly applied time series data pieces in a cumulative data

storage area until they reach total data for said predetermined time; and

adding, to a data piece in said cumulative data storage area, bookmark information having bookmark information indicative of a time corresponding to the data piece for said predetermined time and state transition information indicative of a state of said time series data piece for said predetermined time and loading resulting data pieces in said plurality of data areas of said database for a certain time [in sequence of times corresponding to said time series data pieces].

12. (Twice Amended) A database managing method for managing data in a database, comprising the steps of:

adding, to a predetermined location in a given time series data piece for a predetermined time, bookmark information having bookmark information indicative of a time corresponding to said time series data piece for said predetermined time and state transition information indicative of a state of said time series data piece for said predetermined time and start area information having a flag indicating whether the area is the final one of a plurality of areas in said database and an address area for setting an address;

providing, as said state transition information, one of a value indicative of an online state in which the data area is permitted to be retrieved and a value indicative of a loading state in which loading of data in the data area has not yet been completed and the data area is not permitted to be retrieved;

loading time series data pieces for predetermined times in a plurality of consecutive data areas in said database, each of said plurality of consecutive data

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areas being loaded data for a certain time, the plurality of consecutive data areas being managed by time series [in a sequence of times corresponding to said time series data pieces]; and

raising said flag of start area information in the final one of said plurality of consecutive data areas and setting an address of first one of said plurality of consecutive data areas in said address area.

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14. (Twice Amended) A database managing method for managing data in a database, comprising the steps of:

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reading bookmark information having bookmark information indicative of a time corresponding to a given time series data piece for a predetermined time and state transition information indicative of a state of said time series data piece for said predetermined time from a predetermined bookmark area and setting the state of said time series data piece in said state transition information to a value indicative of a state in which data is empty so as to write said bookmark information in said database; and

loading given time series data pieces for given predetermined times in a plurality of data areas in said database, each of said plurality of data areas being loaded data for a certain time, the plurality of data areas being managed by time series [in sequence of times corresponding to said time series data pieces]; and

writing bookmark information having bookmark information indicative of a time corresponding to a time series data piece for said predetermined time and state transition information indicative of an online state of said time series data piece for

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said predetermined time in said predetermined bookmark area.

19. (Twice Amended) A database managing method according to claim 14, further comprising the steps of:

accumulating repeatedly applied time series data pieces in a cumulative storage area until the cumulative data reach total data for said predetermined time; and

adding, to a data piece in said cumulative data storage area, bookmark information having bookmark information indicative of a time corresponding to said data piece for said predetermined time and state transition information indicate of a state of said time series data piece for said predetermined time and loading resulting data pieces in said plurality of data areas in said database, each of said plurality of data areas being loaded data for a certain time, the plurality of data areas being managed by time series [in sequence of times corresponding to said time series data pieces].

SUB E1> 20. (Twice Amended) A database managing system, comprising:  
a processor having a memory for storing data for a certain time [given time series data pieces for predetermined times] and a clock for reading times at which said data [time series data pieces] are applied, the memory being managed by time series; and

a database connected to said processor and having bookmark information indicative of a time corresponding to a time series data piece for a predetermined time, state transition information indicative of a state of said time series data piece of